

REMARKS

Claims 1-5, 10-12, 21, 22, 24-26 and 28-32 are pending in this application.

By this Amendment, independent claims 1 and 10 are amended to recite additional features disclosed in the specification. Independent claims 21 and 29 are amended to incorporate the subject matter of claim 23. Independent claims 25 and 31 are amended to incorporate the subject matter of claim 27. Claims 22 and 27 are canceled.

No new matter is added. Reconsideration of the application is respectfully requested.

The Office Action rejects claims 1-5 and 10-12 under 35 U.S.C. §103(a) over JP2001-085203 to Mitsumune in view of U.S. Patent No. 6,495,290 to Hinokuma. This rejection is respectfully traversed for at least the following two reasons.

First, Mitsumune does not disclose the electric conductor, as asserted in the Office Action. The conductive member recited in claim 1, as amended, comprises an electric conductor. The electric conductor consists of a residual material of a synthetic carbonaceous material including fullerenes generated in the preparation process of fullerenes from which at least a part of the fullerenes is removed. The fullerenes concentration of the residual material is 0.5 ppm to 10 mass%. Claim 10, as amended, recites similar features.

Mitsumune discloses PTC composition including metallic conductive filler (300-550 weight parts), crosslinking agent (0.01-100 weight parts), fullerene (0.01-100 weight parts) and crystalline polymer (100 weight parts) in the PTC composition. Both of the metallic conductive filler and fullerene correspond to "electric conductor."

Thus, the conductive member recited in claim 1, and similarly recited in claim 10, is different from the PTC composition of Mitsumune in the point that recited electric conductor consists only of the residual material, so the recited conductive member cannot be obtained by merely replacing fullerene in PTC composition of Mitsumune with residual material recited in claims 1 and 10.

Second, Hinokuma does not disclose the asserted subject matter, such as the synthetic carbonaceous, that is admittedly missing in Mitsumune. In particular, the Office Action asserts that Hinokuma discloses a synthetic carbonaceous material (fullerenes derivative) fullerenes generated in the preparation process from which at least a part of the fullerenes is removed. However, Hinokuma discloses, in Abstract, a carbonaceous material derivative, such as a fullerene derivative, a carbon cluster derivative, or a tubular carbonaceous material derivative. Hinokuma does not disclose a synthetic carbonaceous material from which at least a part of the fullerenes is removed at all.

Further, the recited residual material includes 0.5 ppm to 10 mass% of fullerene. The carbonaceous material containing such amount of fullerene is not disclosed in Hinokuma at all.

Thus, the residual material recited in claims 1 and 10 is greatly different from the material disclosed in Hinokuma. Therefore, the conductive member recited in claims 1 and 10 is not obtained by using the carbonaceous material of Hinokuma to the PTC composition of Mitsumune.

For any or all of the above two reasons, Mitsumune and Hinokuma, either individually or in combination, do not disclose or render obvious the subject matter recited in claims 1 and 10, and claims 2-5, 11 and 12 depending therefrom. Accordingly, withdrawal of the rejection of claims 1-5 and 10-12 under 35 U.S.C. §103(a) is respectfully requested.

The Office Action rejects claims 21-32 under 35 U.S.C. §103(a) over Mitsumune in view of U.S. Patent Publication No. 20040048127 to Shirai. This rejection is respectfully traversed.

As mentioned above, amended independent claims 21, 25, 29 and 31 include a feature of claims 23 or 27 that "a plurality of conductor particles having resin particles formed from the resin and a conductive layer formed on the surface of the resin particles and formed from the

electric conductor are piled up." The applied references do not disclose or render obvious this feature, as recited in claims 21, 24, 29 and 31.

The Office Action asserts that Mitsumune discloses such a structure. However, Mitsumune discloses that, for example, in embodiment 1 (see paragraph [0020]), the conductive composition is obtained by kneading a high density polyethylene TIC filler, crosslinking agent and fullerene at 150°C and 15 minutes. Mitsumune does not pile up the plurality of conductor particles. Thus, the conductive member of the amended claims 21, 25, 29 and 31 is not disclosed in Mitsumune at all. Shirai also does not teach such the conductive member. Therefore, the subject matter recited in claims 21, 25, 29 and 31 is not disclosed or rendered obvious over Mitsumune in view of Shirai.

Further, regarding claims 25 and 31, the Office Action asserts that Shirai discloses carbon derivative that has amorphous structure whose impedance behavior is similar to the carbon compound measured in an X-ray diffraction spectrum. This assertion is improper for at least two reasons.

First, this assertion by the Office Action does not appear to be about Shirai but Hinokuma. Second, the x-ray diffraction spectrum of a carbonaceous compound is never easily derived from impedance behavior. Thus, the above Office Action's understanding about claims 25 and 31 is incorrect. In this viewpoint, the subject matter of the amended claims 25 and 31 is not disclosed in the applied references.

For at least the above reasons, Mitsumune and Shirai, either individually or in combination, do not disclose or suggest the subject matter recited in claims 21, 25, 29 and 31, and claims 22, 24, 26, 28, 30 and 32 depending therefrom. Accordingly, withdrawal of the rejection of claims 21, 22, 24-26 and 28-32 under 35 U.S.C. §103(a) is respectfully requested.

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable consideration and prompt allowance of claims 1-5, 10-12, 21, 22, 24-26 and 28-32 are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



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